

# **NOTICE**

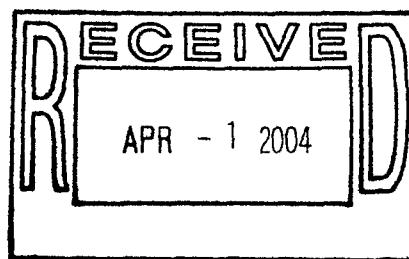
**All drawings located at the end of the document.**



**Comprehensive Risk Assessment  
Sampling and Analysis Plan  
Addendum 04-01  
Phase I**



March 2004



ADMIN RECORD

BZ-A-000681

**Comprehensive Risk Assessment  
Sampling and Analysis Plan  
Addendum 04-01  
Phase I**

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**Comprehensive Risk Assessment  
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Phase I**

Approval received from the U S Environmental Protection Agency

Date \_\_\_\_\_

Approval received from the Colorado Department of Public Health and Environment

Date \_\_\_\_\_

**March 2004**

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**ACRONYMS**

BE	Biological Evaluation
BZ	Buffer Zone
BZSAP	Buffer Zone Sampling and Analysis Plan
CRA	Comprehensive Risk Assessment
DOE	U S Department of Energy
ER	Environmental Restoration
EU	exposure unit
K-H	Kaiser-Hill Company, L L C
pCi/g	picocuries per gram
PMJM	Preble's meadow jumping mouse
QA	quality assurance
QC	quality control
RFETS	Rocky Flats Environmental Technology Site
SAP	Sampling and Analysis Plan
USFWS	U S Fish and Wildlife Service

## **1.0 INTRODUCTION**

Following accelerated actions at the Rocky Flats Environmental Technology Site (RFETS), the U S Department of Energy (DOE) will perform a Draft Comprehensive Risk Assessment (CRA) to assess human health and ecological risks posed by remaining metals, chemicals, and radionuclides. To support completion of the CRA, DOE is conducting a data adequacy review to identify areas of RFETS that may need additional sampling. As the first phase of the review, DOE has agreed with the recommendation of the Risk Assessment Work Group (Colorado Department of Public Health and Environment, U S Environmental Protection Agency, DOE, U S Fish and Wildlife Service (USFWS), and Kaiser-Hill Company, L L C [K-H]) to perform additional surface soil sampling in the large area of the Buffer Zone (BZ) outside of areas that have identified contaminant releases to the environment. The objective of the sampling is to document the assumption that the large area of the BZ is uncontaminated. This evaluation will identify areas that require further consideration via the consultative process for either additional characterization and/or remedial action. The outcome of the consultative process will be incorporated in the disposition of each IHSS Group. Sampling supports the data quality objectives of the Draft Final Comprehensive Work Plan and Methodology for RFETS (DOE 2003). It is anticipated that sampling activities will start during early March, 2004.

Following completion of the data adequacy review, additional sampling may be necessary to support completion of the CRA. This second phase will address areas where additional data may be required based on historical release information, past or future anticipate accelerated actions, special geographic features and/or special human health and ecological receptor considerations. If additional sampling is needed, a second sampling addendum will be prepared for agency approval.

## **2 0 SAMPLING**

Surface soil sampling will be conducted on a 30-acre grid basis within each exposure unit (EU), as shown on Figure 1. Statistical grids have computer-generated random start points and orientations. The relationship between EUs and the Preble's meadow jumping mouse (PMJM) protected area is shown on Figure 2.

Sampling will be of metals and radionuclides in surface soil. Grid cells with existing metal and radionuclide surface soil data will not be sampled. Grid cells with only radionuclide data will be sampled for metals. Grid cells with only metal data will be sampled for radionuclides. Grid cells without existing metal and radionuclide data will be sampled for both categories of analytes. Existing surface soil radionuclide and metal data in each grid cell are shown on Figures 3 and 4. Table 1 lists the radionuclides and metals for which samples will be analyzed. The analytes in Table 1 comprise the standard metal and radionuclide analytical suites requested from off-site laboratories to support characterization and confirmation for Environmental Restoration (ER) activities (K-H 2003). A Biological Evaluation (BE) of the potential impacts of sampling in the PMJM habitat was performed. The USFWS determined that PMJM habitat within the

proposed sampling areas would not be adversely affected USFWS approval to proceed was issued on February 27, 2004

**Table 1**  
**Radionuclide and Metal Analytes**

Analyte Group	Analyte
Radionuclides	Americium-241
	Plutonium-239/240
	Uranium-234
	Uranium-235
	Uranium-238
Metals	Aluminum
	Antimony
	Arsenic
	Barium
	Beryllium
	Boron
	Cadmium
	Calcium
	Chromium (Total)
	Cobalt
	Copper
	Iron
	Lead
	Lithium
	Magnesium
	Manganese
	Mercury
	Molybdenum
	Nickel
	Selenium
	Silica
	Silver
	Sodium
	Strontium
	Thallium
	Tin
	Titanium
	Uranium (Total)
	Vanadium
	Zinc

Grid cells are numbered sequentially, beginning at the western edge of the BZ, as shown on Figure 5. Only grid cells that have subsample points identified will be sampled. Within each grid cell, surface soil subsamples will be collected in each quadrant and in the center. Subsamples will be collected from the surface to a depth of 6 inches using a hand auger, slide hammer, or trowel. The five subsamples will be composited into a single sample and aliquots will be extracted for the metal and/or radionuclide analyses. Vegetation and debris (for example, rocks, and sticks) will be removed from each of the 5 subsamples before compositing. The center subsample location will be designated as the composite sample location. Each subsample will be designated by the cell number and the geographic quadrant within the cell. For example, the subsample in the northwestern corner of grid number Q10 will be designated Q10-NW. Sampling locations will be surveyed, marked, and recorded in accordance with the Buffer Zone Sampling and Analysis Plan (BZSAP) (DOE 2002).

Proposed sampling locations and analyte groups are shown on Figure 5, summarized in Table 2, and described in Table 3. As shown on Figure 5, one grid cell (G8) lies partially inside the western portion of the Industrial Area. Subsample locations were adjusted, where necessary, to account for geographic features such as streams and roads, as well as accessibility by the sampling team. Sampling, data management, and analytical methods will be in accordance with the BZSAP (DOE 2002).

**Table 2**  
**Proposed Sampling Summary**

Category	Total
Number of Proposed Grid Cells Sampled	118
Number of Proposed Grid Cells Sampled for Both Radionuclides and Metals	97
Number of Proposed Grid Cells Sampled for Radionuclides Only	12
Number of Proposed Grid Cells Sampled for Metals Only	9

The BE for this sampling effort was coordinated with the USFWS. In accordance with the BE, no permanent disturbance of PMJM habitat (Figure 2) will occur from project activities. Rocks or soil not needed for analytical purposes will be returned to the sample hole. Each sampling location in PMJM habitat will be reseeded with a native seed mixture consisting of the following species: western wheatgrass (*Agropyron smithii*), slender wheatgrass (*Agropyron trachycaulum*), big bluestem (*Andropogon gerardii*), side-oats grama (*Bouteloua curtipendula*), blue grama (*Bouteloua gracilis*), buffalo grass (*Buchloe dactyloides*), and green needlegrass (*Stipa viridula*).

THIS TARGET SHEET REPRESENTS AN  
OVER-SIZED MAP / PLATE FOR THIS DOCUMENT:  
(Ref: 04-RF-00366; JLB-027-04)

# **Comprehensive Risk Assessment Sampling and Analysis Plan Addendum 04-01 Phase I**

**March 2004**

**Figure 5:**

## **30-Acre Grid Surface Soil Sampling Locations**

**File: W:\Projects\Fy2004\CRA\SAP\cra\_sap.apr\Figure 5**

**February 19, 2004**

**CERCLA Administrative Record Document, BZ-A-000681**

U S DEPARTMENT OF ENERGY  
ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

GOLDEN, COLORADO

BZ-A-00061

### **3 0 REFERENCES**

DOE, 2002, Buffer Zone Sampling and Analysis Plan, Rocky Flats Environmental Technology Site, Golden, Colorado, April

DOE, 2003, Draft Final Comprehensive Work Plan and Methodology, September

K-H, 2003, BOA Implementation Requirements, GR04-A 4, October

**Table 3**  
**Sampling Specifications for CRA BZ Sampling**

Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
West Area	A7	AK39-000	2074351 154	749237 671	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	A7	A7-N1	2074328 805	750102 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	A7	A7-N2	2074328 805	750674 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	A7	A7-S1	2074341 597	747814 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	A7	A7-S2	2074341 597	748373 532	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	A10	AK56-000	2074344 774	752667 042	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	A10	A10-N1	2074316 013	753534 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	A10	A10-N2	2074316 013	754106 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	A10	A10-S1	2074328 805	751246 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	A10	A10-S2	2074341 597	751818 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	B12	AM67-000	2074869 534	754876 866	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	B12	B12-NE	2075383 261	755160 779	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	B12	B12-NW	2074405 557	755147 987	0-0 5	Radionuclides Metals	Alpha Spec 6010

Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
West Area	B12	B12-SE	2075396 053	754678 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	B12	B12-SW	2074418 349	754652 739	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	B6	AN33-000	2075116 500	748093 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	B6	B6-NE	2075396 053	748386 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	B6	B6-NW	2074824 053	748386 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	B6	B6-SE	2075396 053	747814 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	B6	B6-SW	2074824 053	747882 946	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	B7	AN39-000	2075116 500	749236 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	B7	B7-NE	2075396 053	749530 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	B7	B7-NW	2074824 053	749530 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	B7	B7-SE	2075327 431	748958 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	B7	B7-SW	2074824 053	748958 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	B8	AN45-000	2075116 500	750379 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	B8	B8-NE	2075396 053	750674 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	B8	B8-NW	2074824 053	750674 324	0-0 5	Radionuclides Metals	Alpha Spec 6010

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<b>Exposure Unit</b>	<b>Cell Number</b>	<b>Location Code</b>	<b>Easting</b>	<b>Northing</b>	<b>Depth Interval (feet)</b>	<b>Analyte</b>	<b>Analytical Method</b>
West Area	B8	B8-SE	2075396 053	750102 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	B8	B8-SW	2074824 053	750102 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	B9	AN50-000	2075116 500	751522 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	B9	B9-NE	2075396 053	751818 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	B9	B9-NW	2074824 053	751818 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	B9	B9-SE	2075396 053	751246 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	B9	B9-SW	2074824 053	751246 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	B10	AN56-000	2075116 500	752665 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	B10	B10-NE	2075396 053	752962 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	B10	B10-NW	2074824 053	752879 977	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	B10	B10-SE	2075396 053	752390 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	B10	B10-SW	2074824 053	752390 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	B11	AN62-000	2075116 500	753808 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	B11	B11-NE	2075396 053	754106 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	B11	B11-NW	2074824 053	754106 324	0-0 5	Radionuclides Metals	Alpha Spec 6010

Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
West Area	B11	B11-SE	2075464 675	753397 079	0-0 5	Radionuclides	Alpha Spec 6010
West Area	B11	B11-SW	2074892 675	753548 048	0-0 5	Radionuclides	Alpha Spec 6010
West Area	C8	AT45-000	2076259 500	750379 500	0-0 5	Radionuclides	Alpha Spec 6010
West Area	C8	C8-NE	2076540 053	750674 324	0-0 5	Radionuclides	Alpha Spec 6010
West Area	C8	C8-NW	2075968 053	750674 324	0-0 5	Radionuclides	Alpha Spec 6010
West Area	C8	C8-SE	2076540 053	750102 324	0-0 5	Radionuclides	Alpha Spec 6010
West Area	C8	C8-SW	2075968 053	750102 324	0-0 5	Radionuclides	Alpha Spec 6010
West Area	C9	AT50-000	2076259 500	751522 500	0-0 5	Radionuclides	Alpha Spec 6010
West Area	C9	C9-NE	2076540 053	751818 324	0-0 5	Radionuclides	Alpha Spec 6010
West Area	C9	C9-NW	2075968 053	751818 324	0-0 5	Radionuclides	Alpha Spec 6010
West Area	C9	C9-SE	2076540 053	751246 324	0-0 5	Radionuclides	Alpha Spec 6010
West Area	C9	C9-SW	2075968 053	751246 324	0-0 5	Radionuclides	Alpha Spec 6010
West Area	C10	AT56-000	2076259 500	752665 500	0-0 5	Radionuclides	Alpha Spec 6010
West Area	C10	C10-NE	2076540 053	752962 324	0-0 5	Radionuclides	Alpha Spec 6010
West Area	C10	C10-NW	2075968 053	752962 324	0-0 5	Radionuclides	Alpha Spec 6010

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Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
West Area	C10	C10-SE	2076540 053	752390 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	C10	C10-SW	2075968 053	752390 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	C11	AT62-000	2076259 037	753808 016	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	C11	C11-NE	2076540 053	754106 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	C11	C11-NW	2075968 053	754106 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	C11	C11-SE	2076540 053	753534 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	C11	C11-SW	2075968 053	753534 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	C12	AT67-000	2076223 822	754859 824	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	C12	C12-NE	2076540 053	755173 571	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	C12	C12-NW	2075858 258	755186 363	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	C12	C12-SE	2076540 053	754627 155	0-0 5	Radionuclides Metals	Alpha Spec 6010
West Area	C12	C12-SW	2075968 053	754639 947	0-0 5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	D8	AZ45-000	2077402 500	750379 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	D8	D8-NE	2077684 053	750674 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	D8	D8-NW	2077112 053	750674 324	0-0 5	Radionuclides Metals	Alpha Spec 6010

Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
Inter Drainage	D8	D8-SE	2077684 053	750102 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	D8	D8-SW	2077112 053	750102 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	E9	BF50-000	2078545 500	751522 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	E9	E9-NE	2078828 053	751818 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	E9	E9-NW	2078256 053	751818 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	E9	E9-SE	2078828 053	751246 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	E9	E9-SW	2078256 053	751246 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	F9	BK50-000	2079688 500	751522 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	F9	F9-NE	2079972 053	751818 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	F9	F9-NW	2079400 053	751818 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	F9	F9-SE	2079972 053	751246 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	F9	F9-SW	2079400 053	751246 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	F10	BL56-000	2079743 398	752596 878	0-0 5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	F10	F10-NE	2079972 053	752962 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	F10	F10-NW	2079400 053	752962 324	0-0 5	Radionuclides Metals	Alpha Spec 6010

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<b>Exposure Unit</b>	<b>Cell Number</b>	<b>Location Code</b>	<b>Easting</b>	<b>Northing</b>	<b>Depth Interval (feet)</b>	<b>Analyte</b>	<b>Analytical Method</b>
Inter Drainage	F10	F10-SE	2079972 053	752390 324	0-0.5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	F10	F10-SW	2079400 053	752390 324	0-0.5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	G10	BQ56-001	2080831 500	752665 500	0-0.5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	G10	G10-NE	2081116 053	752962 324	0-0.5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	G10	G10-NW	2080544 053	752962 324	0-0.5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	G10	G10-SE	2081116 053	752390 324	0-0.5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	G10	G10-SW	2080544 053	752390 324	0-0.5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	H11	BW61-000	2082029 398	753753 602	0-0.5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	H11	H11-NE	2082260 053	754106 324	0-0.5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	H11	H11-NW	2081688 053	754106 324	0-0.5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	H11	H11-SE	2082260 053	753534 324	0-0.5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	H11	H11-SW	2081688 053	753479 426	0-0.5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	I12	CB67-000	2083100 473	754865 748	0-0.5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	I12	I12-NE	2083417 777	755346 394	0-0.5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	I12	I12-NW	2082801 784	755252 215	0-0.5	Radionuclides Metals	Alpha Spec 6010

Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
Inter Drainage	I12	I12-SE	2083404 053	754678 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	I12	I12-SW	2082832 053	754623 426	0-0 5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	J12	CH67-000	2084260 500	754951 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	J12	J12-NE	2084548 053	755181 701	0-0 5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	J12	J12-NW	2083976 053	755181 701	0-0 5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	J12	J12-SE	2084548 053	754678 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	J12	J12-SW	2083976 053	754678 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	K13	CN73-000	2085403 500	756094 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	K13	K13-NE	2085692 053	756394 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	K13	K13-NW	2085120 053	756394 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	K13	K13-SE	2085692 053	755822 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	K13	K13-SW	2085120 053	755822 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	L13	CT73-000	2086546 500	756094 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	L13	L13-NE	2086836 053	756394 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Inter Drainage	L13	L13-NW	2086264 053	756394 324	0-0 5	Radionuclides Metals	Alpha Spec 6010

Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
Inter Drainage	L13	L13-SE	2086836 053	755822 324	0-0.5	Radionuclides	Alpha Spec 6010 Metals
Inter Drainage	L13	L13-SW	2086264 053	755822 324	0-0.5	Radionuclides	Alpha Spec 6010 Metals
Inter Drainage	M14	CY78-000	2087687 808	757104 206	0-0.5	Radionuclides	Alpha Spec 6010 Metals
Inter Drainage	M14	M14-NE	2087980 053	757346 443	0-0.5	Radionuclides	Alpha Spec 6010 Metals
Inter Drainage	M14	M14-NW	2087408 053	757346 443	0-0.5	Radionuclides	Alpha Spec 6010 Metals
Inter Drainage	M14	M14-SE	2087992 845	756902 363	0-0.5	Radionuclides	Alpha Spec 6010 Metals
Inter Drainage	M14	M14-SW	2087408 053	756902 363	0-0.5	Radionuclides	Alpha Spec 6010 Metals
Rock Creek Drainage	D9	AZ50-000	2077402 500	751522 500	0-0.5	Radionuclides	Alpha Spec 6010 Metals
Rock Creek Drainage	D9	D9-NE	2077684 053	751818 324	0-0.5	Radionuclides	Alpha Spec 6010 Metals
Rock Creek Drainage	D9	D9-NW	2077112 053	751818 324	0-0.5	Radionuclides	Alpha Spec 6010 Metals
Rock Creek Drainage	D9	D9-SE	2077684 053	751246 324	0-0.5	Radionuclides	Alpha Spec 6010 Metals
Rock Creek Drainage	D9	D9-SW	2077112 053	751246 324	0-0.5	Radionuclides	Alpha Spec 6010 Metals
Rock Creek Drainage	D10	AZ56-000	2077402 500	752665 500	0-0.5	Radionuclides	Alpha Spec 6010 Metals
Rock Creek Drainage	D10	D10-NE	2077684 053	752962 324	0-0.5	Radionuclides	Alpha Spec 6010 Metals
Rock Creek Drainage	D10	D10-NW	2077112 053	752962 324	0-0.5	Radionuclides	Alpha Spec 6010 Metals

Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
Rock Creek Drainage	D10	D10-SE	2077684 053	752390 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	D10	D10-SW	2077112 053	752390 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	D11	AZ62-000	2077402 555	753808 445	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	D11	D11-NE	2077684 053	754106 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	D11	D11-NW	2077112 053	754106 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	D11	D11-SE	2077684 053	753534 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	D11	D11-SW	2077112 053	753534 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	E10	BF56-000	2078545 500	752665 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	E10	E10-NE	2078828 053	752962 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	E10	E10-NW	2078256 053	752962 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	E10	E10-SE	2078828 053	752390 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	E10	E10-SW	2078256 053	752390 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	E11	BF62-000	2078545 500	753808 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	E11	E11-NE	2078828 053	754106 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	E11	E11-NW	2078256 053	754106 324	0-0 5	Radionuclides Metals	Alpha Spec 6010

Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
Rock Creek Drainage	E11	E11-SE	2078828 053	753534 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	E11	E11-SW	2078256 053	753534 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	E12	BF67-000	2078586 020	754933 093	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	E12	E12-NE	2078828 053	755250 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	E12	E12-NW	2078256 053	755250 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	E12	E12-SE	2078828 053	754678 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	E12	E12-SW	2078256 053	754678 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	F11	BK62-000	2079688 500	753808 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	F11	F11-NE	2079972 053	754106 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	F11	F11-NW	2079400 053	754106 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	F11	F11-SE	2079972 053	753534 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	F11	F11-SW	2079400 053	753534 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	G11	BQ62-000	2080831 500	753808 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	G11	G11-NE	2081116 053	754106 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	G11	G11-NW	2080544 053	754106 324	0-0 5	Radionuclides Metals	Alpha Spec 6010

Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
Rock Creek Drainage	G11	G11-SE	2081116 053	753465 701	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	G11	G11-SW	2080544 053	753534 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	G12	BQ67-000	2080831 500	754951 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	G12	G12-NE	2081116 053	755250 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	G12	G12-NW	2080544 053	755250 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	G12	G12-SE	2081116 053	754678 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	G12	G12-SW	2080544 053	754678 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	H12	BW67-000	2081974 500	754951 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	H12	H12-NE	2082260 053	755250 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	H12	H12-NW	2081688 053	755250 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	H12	H12-SE	2082260 053	754678 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	H12	H12-SW	2081688 053	754678 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	H14	BW79-000	2081972 013	757202 335	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	H14	H14-NE	2082260 053	757538 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	H14	H14-NW	2081688 053	757538 324	0-0 5	Radionuclides Metals	Alpha Spec 6010

Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
Rock Creek Drainage	H14	H14-SE	2082260 053	756966 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	H14	H14-SW	2081688 053	756966 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	I13	CB73-000	2083117 500	756094 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	I13	I13-NE	2083404 053	756394 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	I13	I13-NW	2082832 053	756394 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	I13	I13-SE	2083404 053	755822 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	I13	I13-SW	2082832 053	755822 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	I14	CB79-000	2083115 974	757188 143	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	I14	I14-NE	2083404 053	757538 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	I14	I14-NW	2082832 053	757538 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	I14	I14-SE	2083404 053	756966 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	I14	I14-SW	2082832 053	756966 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	J13	CH73-000	2084260 500	756094 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	J13	J13-NE	2084548 053	756394 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	J13	J13-NW	2083976 053	756394 324	0-0 5	Radionuclides Metals	Alpha Spec 6010

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Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
Rock Creek Drainage	J13	J13-SE	2084548 053	755822 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	J13	J13-SW	2083976 053	755822 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	J14	CH79-000	2084265 706	757231 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	J14	J14-NE	2084548 053	757538 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	J14	J14-NW	2083976 053	757538 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	J14	J14-SE	2084548 053	756966 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	J14	J14-SW	2083976 053	756966 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	K14	CN79-000	2085403 500	757237 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	K14	K14-NE	2085692 053	757538 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	K14	K14-NW	2085120 053	757538 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	K14	K14-SE	2085692 053	756966 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	K14	K14-SW	2085120 053	756966 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	L14	CS79-000	2086532 547	757219 568	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	L14	L14-NE	2086836 053	757538 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	L14	L14-NW	2086264 053	757538 324	0-0 5	Radionuclides Metals	Alpha Spec 6010

Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
Rock Creek Drainage	L14	L14-SE	2086836 053	756966 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Rock Creek Drainage	L14	L14-SW	2086264 053	756966 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	E2	BF10-000	2078624 429	743522 325	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	E2	E2-NE	2078879 221	743810 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	E2	E2-NW	2078307 221	743810 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	E2	E2-SE	2078879 221	743238 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	E2	E2-SW	2078307 221	743238 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	E1	BI05-000	2079159 144	742555 239	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	E1	E1-NE	2079719 853	742743 076	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	E1	E1-NW	2078585 005	742768 660	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	E1	E1-SE	2079729 005	742333 731	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	E1	E1-SW	2078588 645	742333 731	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	F2	BK10-000	2079688 500	743521 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	F2	F2-NE	2079972 053	743810 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	F2	F2-NW	2079400 053	743810 324	0-0 5	Radionuclides Metals	Alpha Spec 6010

Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
Southwest Buffer Zone Area	F2	F2-SE	2079972 053	743238 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	F2	F2-SW	2079400 053	743238 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	G2	BQ10-000	2080831 500	743521 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	G2	G2-NE	2081116 053	743810 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	G2	G2-NW	2080544 053	743810 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	G2	G2-SE	2081116 053	743238 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	G2	G2-SW	2080544 053	743238 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	G1	BT05-000	2081402 326	742546 204	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	G1	G1-NE	2081969 477	742755 868	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	G1	G1-NW	2080847 421	742743 076	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	G1	G1-SE	2081991 421	742333 731	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	G1	G1-SW	2080863 853	742333 731	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	H2	BW10-000	2081974 500	743521 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	H2	H2-NE	2082260 053	743810 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	H2	H2-NW	2081688 053	743810 324	0-0 5	Radionuclides Metals	Alpha Spec 6010

Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
Southwest Buffer Zone Area	H2	H2-SE	2082260 053	743238 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	H2	H2-SW	2081688 053	743238 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	H3	BW16-000	2081974 500	744664 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	H3	H3-NE	2082260 053	745022 946	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	H3	H3-NW	2081688 053	745022 946	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	H3	H3-SE	2082260 053	744382 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	H3	H3-SW	2081688 053	744382 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	I2	CB10-000	2083117 500	743521 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	I2	I2-NE	2083404 053	743810 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	I2	I2-NW	2082832 053	743810 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	I2	I2-SE	2083404 053	743238 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	I2	I2-SW	2082832 053	743238 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	I3	CB16-000	2083117 500	744664 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	I3	I3-NE	2083404 053	744954 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	I3	I3-NW	2082832 053	744954 324	0-0 5	Radionuclides Metals	Alpha Spec 6010

Exposure Unit	Cell Number	Location Code	Basing	Northing	Depth Interval (feet)	Analyte	Analytical Method
Southwest Buffer Zone Area	I3	I3-SE	2083404 053	744382 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	I3	I3-SW	2082832 053	744382 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	I1	CE05-000	2083690 956	742532 994	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	I1	I1-NE	2084270 269	742704 700	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	I1	I1-NW	2083126 269	742730 284	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	I1	I1-SE	2084266 629	742333 731	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	I1	I1-SW	2083122 629	742320 939	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	J2	CH10-000	2084260 500	743521 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	J2	J2-NE	2084548 053	743810 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	J2	J2-NW	2083976 053	743810 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	J2	J2-SE	2084548 053	743238 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	J2	J2-SW	2083976 053	743238 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	J3	CH16-000	2084260 500	744664 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	J3	J3-NE	2084548 053	744954 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	J3	J3-NW	2083976 053	744954 324	0-0 5	Radionuclides Metals	Alpha Spec 6010

Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
Southwest Buffer Zone Area	J3	J3-SE	2084548 053	744382 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	J3	J3-SW	2083976 053	744382 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	K2	CN10-000	2085403 500	743521 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	K2	K2-NE	2085692 053	743810 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	K2	K2-NW	2085120 053	743810 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	K2	K2-SE	2085692 053	743238 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	K2	K2-SW	2085120 053	743238 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	K3	CN16-000	2085403 500	744664 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	K3	K3-NE	2085692 053	745009 221	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	K3	K3-NW	2085120 053	745009 221	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	K3	K3-SE	2085692 053	744382 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southwest Buffer Zone Area	K3	K3-SW	2085120 053	744382 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	E3	BF16-000	2078620 585	744665 244	0-0 5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	E3	E3-NE	2078892 013	744995 497	0-0 5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	E3	E3-NW	2078320 013	744995 497	0-0 5	Radionuclides Metals	Alpha Spec 6010

Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
Upper Woman Creek Drainage	E3	E3-SE	2078892 013	744382 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	E3	E3-SW	2078320 013	744382 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	E4	BF22-000	2078616 758	745808 215	0-0 5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	E4	E4-NE	2078902 498	746098 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	E4	E4-NW	2078313 318	746098 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	E4	E4-SE	2078896 772	745520 597	0-0 5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	E4	E4-SW	2078415 116	745473 697	0-0 5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	E5	BF27-000	2078609 609	746954 434	0-0 5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	E5	E5-NE	2078891 045	747242 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	E5	E5-NW	2078321 316	747173 701	0-0 5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	E5	E5-SE	2078902 498	746664 597	0-0 5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	E5	E5-SW	2078301 865	746670 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	F3	BK16-000	2079688 500	744664 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	F3	F3-NE	2079972 053	745022 946	0-0 5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	F3	F3-NW	2079400 053	745022 946	0-0 5	Radionuclides Metals	Alpha Spec 6010

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<b>Exposure Unit</b>	<b>Cell Number</b>	<b>Location Code</b>	<b>Easting</b>	<b>Northing</b>	<b>Depth Interval (feet)</b>	<b>Analyte</b>	<b>Analytical Method</b>
Upper Woman Creek Drainage	F3	F3-SE	2079972 053	744382 324	0-0.5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	F3	F3-SW	2079400 053	744382 324	0-0.5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	G3	BQ16-000	2080831 500	744664 500	0-0.5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	G3	G3-NE	2081116 053	744995 497	0-0.5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	G3	G3-NW	2080544 053	744995 497	0-0.5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	G3	G3-SE	2081116 053	744382 324	0-0.5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	G3	G3-SW	2080544 053	744382 324	0-0.5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	H4	BW22-000	2081974 500	745807 500	0-0.5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	H4	H4-NE	2082260 053	746098 324	0-0.5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	H4	H4-NW	2081688 053	746098 324	0-0.5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	H4	H4-SE	2082260 053	745526 324	0-0.5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	H4	H4-SW	2081688 053	745526 324	0-0.5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	I4	CB22-000	2083117 500	745807 500	0-0.5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	I4	I4-NE	2083404 053	746098 324	0-0.5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	I4	I4-NW	2082832 053	746098 324	0-0.5	Radionuclides Metals	Alpha Spec 6010

Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
Upper Woman Creek Drainage	I4	I4-SE	2083404 053	745526 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	I4	I4-SW	2082832 053	745526 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	I5	CB27-000	2083117 500	746950 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	I5	I5-NE	2083404 053	747242 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	I5	I5-NW	2082832 053	747242 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	I5	I5-SE	2083404 053	746587 977	0-0 5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	I5	I5-SW	2082832 053	746546 804	0-0 5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	J4	CH22-000	2084260 500	745807 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	J4	J4-NE	2084548 053	746098 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	J4	J4-NW	2083976 053	746098 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	J4	J4-SE	2084548 053	745526 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	J4	J4-SW	2083976 053	745526 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	K4	CN22-000	2085403 500	745807 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	K4	K4-NE	2085692 053	746098 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	K4	K4-NW	2085120 053	746098 324	0-0 5	Radionuclides Metals	Alpha Spec 6010

Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
Upper Woman Creek Drainage	K4	K4-SE	2085692 053	745526 324	0-0.5	Radionuclides Metals	Alpha Spec 6010
Upper Woman Creek Drainage	K4	K4-SW	2085120 053	745526 324	0-0.5	Radionuclides Metals	Alpha Spec 6010
Industrial Area	G8	BQ44-000	2080843 986	750342 042	0-0.5	Radionuclides	Alpha Spec
Industrial Area	G8	G8-NE	2081116 053	750674 324	0-0.5	Radionuclides	Alpha Spec
Industrial Area	G8	G8-NW	2080544 053	750674 324	0-0.5	Radionuclides	Alpha Spec
Industrial Area	G8	G8-SE	2081116 053	750102 324	0-0.5	Radionuclides	Alpha Spec
Industrial Area	G8	G8-SW	2080544 053	750102 324	0-0.5	Radionuclides	Alpha Spec
No Name Gulch Drainage	G9	BQ50-000	2080904 362	751548 427	0-0.5	Radionuclides	Alpha Spec
No Name Gulch Drainage	G9	G9-NE	2081228 428	751705 948	0-0.5	Radionuclides	Alpha Spec
No Name Gulch Drainage	G9	G9-NW	2080544 053	751818 324	0-0.5	Radionuclides	Alpha Spec
No Name Gulch Drainage	G9	G9-SE	2081290 859	751046 546	0-0.5	Radionuclides	Alpha Spec
No Name Gulch Drainage	G9	G9-SW	2080469 136	751246 324	0-0.5	Radionuclides	Alpha Spec
No Name Gulch Drainage	K11	CN62-000	2085403 500	753808 500	0-0.5	Radionuclides Metals	Alpha Spec 6010
No Name Gulch Drainage	K11	K11-NE	2085692 053	754106 324	0-0.5	Radionuclides Metals	Alpha Spec 6010
No Name Gulch Drainage	K11	K11-NW	2085120 053	754106 324	0-0.5	Radionuclides Metals	Alpha Spec 6010
No Name Gulch Drainage	K11	K11-SE	2085692 053	753534 324	0-0.5	Radionuclides Metals	Alpha Spec 6010

Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
No Name Gulch Drainage	K11	K11-SW	2085120 053	753534 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
No Name Gulch Drainage	K12	CN67-000	2085403 500	754951 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
No Name Gulch Drainage	K12	K12-NE	2085692 053	755209 150	0-0 5	Radionuclides Metals	Alpha Spec 6010
No Name Gulch Drainage	K12	K12-NW	2085120 053	755209 150	0-0 5	Radionuclides Metals	Alpha Spec 6010
No Name Gulch Drainage	K12	K12-SE	2085692 053	754678 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
No Name Gulch Drainage	K12	K12-SW	2085120 053	754678 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
No Name Gulch Drainage	L11	CT62-000	2086546 500	753808 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
No Name Gulch Drainage	L11	L11-NE	2086836 053	754106 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
No Name Gulch Drainage	L11	L11-NW	2086264 053	754106 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
No Name Gulch Drainage	L11	L11-SE	2086836 053	753534 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
No Name Gulch Drainage	L11	L11-SW	2086264 053	753534 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
No Name Gulch Drainage	L12	CT67-000	2086546 500	754951 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
No Name Gulch Drainage	L12	L12-NE	2086836 053	755250 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
No Name Gulch Drainage	L12	L12-NW	2086264 053	755250 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
No Name Gulch Drainage	L12	L12-SE	2086836 053	754678 324	0-0 5	Radionuclides Metals	Alpha Spec 6010

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Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
No Name Gulch Drainage	L12	L12-SW	2086264 053	754678 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
No Name Gulch Drainage	M11	CY62-000	2087689 500	753808 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
No Name Gulch Drainage	M11	M11-NE	2087980 053	754106 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
No Name Gulch Drainage	M11	M11-NW	2087408 053	754106 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
No Name Gulch Drainage	M11	M11-SE	2087980 053	753534 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
No Name Gulch Drainage	M11	M11-SW	2087408 053	753534 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
No Name Gulch Drainage	M12	CY67-000	2087689 500	754951 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
No Name Gulch Drainage	M12	M12-NE	2087980 053	755250 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
No Name Gulch Drainage	M12	M12-NW	2087408 053	755250 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
No Name Gulch Drainage	M12	M12-SE	2087980 053	754678 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
No Name Gulch Drainage	M12	M12-SW	2087408 053	754678 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
No Name Gulch Drainage	M13	CY73-000	2087689 500	756094 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
No Name Gulch Drainage	M13	M13-NE	2087980 053	756394 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
No Name Gulch Drainage	M13	M13-NW	2087408 053	756394 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
No Name Gulch Drainage	M13	M13-SE	2087980 053	755822 324	0-0 5	Radionuclides Metals	Alpha Spec 6010

Exposure Unit	Cell Number	Location Code	Boring	Northing	Depth Interval (feet)	Analytical Method
No Name Gulch Drainage	M13	M13-SW	2087408 053	755822 324	0-0 5	Radionuclides Metals
Southeast Buffer Zone Area	K1	CQ05-000	2085977 020	742558 111	0-0 5	Radionuclides Metals
Southeast Buffer Zone Area	K1	K1-NE	2086558 269	742691 908	0-0 5	Radionuclides Metals
Southeast Buffer Zone Area	K1	K1-NW	2085410 629	742691 908	0-0 5	Radionuclides Metals
Southeast Buffer Zone Area	K1	K1-SE	2086554 629	742320 939	0-0 5	Radionuclides Metals
Southeast Buffer Zone Area	K1	K1-SW	2085414 269	742308 147	0-0 5	Radionuclides Metals
Southeast Buffer Zone Area	L2	CT10-000	2086546 500	743521 500	0-0 5	Radionuclides Metals
Southeast Buffer Zone Area	L2	L2-NE	2086836 053	743810 324	0-0 5	Radionuclides Metals
Southeast Buffer Zone Area	L2	L2-NW	2086264 053	743810 324	0-0 5	Radionuclides Metals
Southeast Buffer Zone Area	L2	L2-SE	2086836 053	743238 324	0-0 5	Radionuclides Metals
Southeast Buffer Zone Area	L2	L2-SW	2086264 053	743238 324	0-0 5	Radionuclides Metals
Southeast Buffer Zone Area	L3	CT16-000	2086546 500	744664 500	0-0 5	Radionuclides Metals
Southeast Buffer Zone Area	L3	L3-NE	2086836 053	744954 324	0-0 5	Radionuclides Metals
Southeast Buffer Zone Area	L3	L3-NW	2086264 053	744899 426	0-0 5	Radionuclides Metals
Southeast Buffer Zone Area	L3	L3-SE	2086836 053	744382 324	0-0 5	Radionuclides Metals

Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
Southeast Buffer Zone Area	L3	L3-SW	2086264 053	744382 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	M2	CY10-000	2087689 500	743521 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	M2	M2-NE	2087980 053	743810 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	M2	M2-NW	2087408 053	743810 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	M2	M2-SE	2087980 053	743238 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	M2	M2-SW	2087408 053	743238 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	M3	CY16-000	2087689 500	744664 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	M3	M3-NE	2087980 053	744954 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	M3	M3-NW	2087408 053	744954 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	M3	M3-SE	2087980 053	744382 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	M3	M3-SW	2087408 053	744382 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	M1	DB06-000	2088262 438	742572 691	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	M1	M1-NE	2088338 468	742737 720	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	M1	M1-NW	2087687 668	742737 720	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	M1	M1-SE	2088841 038	742356 940	0-0 5	Radionuclides Metals	Alpha Spec 6010

Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
Southeast Buffer Zone Area	M1	M1-SW	2087690 238	742360 339	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	N2	DE10-000	2088832 500	743521 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	N2	N2-NE	2089124 053	743810 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	N2	N2-NW	2088552 053	743810 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	N2	N2-SE	2089124 053	743238 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	N2	N2-SW	2088552 053	743238 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	N3	DE16-000	2088832 500	744664 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	N3	N3-NE	2089124 053	744954 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	N3	N3-NW	2088552 053	744954 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	N3	N3-SE	2089124 053	744382 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	N3	N3-SW	2088552 053	744382 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	O2	DK10-000	2089975 500	743521 500	0-0 5	Metals	6010
Southeast Buffer Zone Area	O2	O2-NE	2090268 053	743810 324	0-0 5	Metals	6010
Southeast Buffer Zone Area	O2	O2-NW	2089696 053	743810 324	0-0 5	Metals	6010
Southeast Buffer Zone Area	O2	O2-SE	2090268 053	743238 324	0-0 5	Metals	6010
Southeast Buffer Zone Area	O2	O2-SW	2089696 053	743238 324	0-0 5	Metals	6010

Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
Southeast Buffer Zone Area	O1	DN06-000	2090553 548	742593 655	0-0 5	Metals	6010
Southeast Buffer Zone Area	O1	O1-NE	2091137 155	742734 409	0-0 5	Metals	6010
Southeast Buffer Zone Area	O1	O1-NW	2089989 520	742740 599	0-0 5	Metals	6010
Southeast Buffer Zone Area	O1	O1-SE	2091133 520	742338 274	0-0 5	Metals	6010
Southeast Buffer Zone Area	O1	O1-SW	2089980 775	742338 274	0-0 5	Metals	6010
Southeast Buffer Zone Area	P2	DP10-000	2091118 500	743521 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	P2	P2-NE	2091374 904	743810 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	P2	P2-NW	2090840 053	743741 701	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	P2	P2-SE	2091412 053	743238 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	P2	P2-SW	2090840 053	743238 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	Q1	DY07-000	2092817 466	742776 411	0-0 5	Metals	6010
Southeast Buffer Zone Area	Q1	Q1-NE	2093421 520	742722 030	0-0 5	Metals	6010
Southeast Buffer Zone Area	Q1	Q1-NW	2092277 520	742709 651	0-0 5	Metals	6010
Southeast Buffer Zone Area	Q1	Q1-SE	2093412 775	742298 645	0-0 5	Metals	6010
Southeast Buffer Zone Area	Q1	Q1-SW	2092268 775	742338 274	0-0 5	Metals	6010
Southeast Buffer Zone Area	R2	EB10-000	2093404 500	743521 500	0-0 5	Radionuclides Metals	Alpha Spec 6010

Exposure Unit	Cell Number	Location Code	Basing	Northing	Depth Interval (feet)	Analyte	Analytical Method
Southeast Buffer Zone Area	R2	R2-NE	2093700 053	743810 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	R2	R2-NW	2093128 053	743810 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	R2	R2-SE	2093700 053	743238 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	R2	R2-SW	2093128 053	743238 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Southeast Buffer Zone Area	R3	EB16-000	2093419 442	744610 491	0-0 5	Metals	6010
Southeast Buffer Zone Area	R3	R3-NE	2093700 053	744954 324	0-0 5	Metals	6010
Southeast Buffer Zone Area	R3	R3-NW	2093128 053	744954 324	0-0 5	Metals	6010
Southeast Buffer Zone Area	R3	R3-SE	2093700 053	744382 324	0-0 5	Metals	6010
Southeast Buffer Zone Area	R3	R3-SW	2093128 053	744382 324	0-0 5	Metals	6010
Lower Woman Creek Drainage	N5	DE27-000	2088832 500	746950 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Lower Woman Creek Drainage	N5	N5-NE	2089124 053	747242 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Lower Woman Creek Drainage	N5	N5-NW	2088552 053	747242 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Lower Woman Creek Drainage	N5	N5-SE	2089220 124	746684 048	0-0 5	Radionuclides Metals	Alpha Spec 6010
Lower Woman Creek Drainage	N5	N5-SW	2088648 124	746684 048	0-0 5	Radionuclides Metals	Alpha Spec 6010
Lower Woman Creek Drainage	O5	DK27-000	2089975 500	746950 500	0-0 5	Metals	6010
Lower Woman Creek Drainage	O5	O5-NE	2090268 053	747242 324	0-0 5	Metals	6010

Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
Lower Woman Creek Drainage	O5	O5-NW	2089696 053	747242 324	0-0 5	Metals	6010
Lower Woman Creek Drainage	O5	O5-SE	2090268 053	746670 324	0-0 5	Metals	6010
Lower Woman Creek Drainage	O5	O5-SW	2089696 053	746670 324	0-0 5	Metals	6010
Lower Woman Creek Drainage	P3	DP16-000	2091118 500	744664 500	0-0 5	Metals	6010
Lower Woman Creek Drainage	P3	P3-NE	2091412 053	744954 324	0-0 5	Metals	6010
Lower Woman Creek Drainage	P3	P3-NW	2090840 053	744954 324	0-0 5	Metals	6010
Lower Woman Creek Drainage	P3	P3-SE	2091367 474	744374 894	0-0 5	Metals	6010
Lower Woman Creek Drainage	P3	P3-SW	2090840 053	744382 324	0-0 5	Metals	6010
Wind Blown Area	N6	DE33-000	2088832 500	748031 069	0-0 5	Radionuclides	Alpha Spec
Wind Blown Area	N6	N6-NE	2089136 539	748436 268	0-0 5	Radionuclides	Alpha Spec
Wind Blown Area	N6	N6-NW	2088552 053	748386 324	0-0 5	Radionuclides	Alpha Spec
Wind Blown Area	N6	N6-SE	2089198 970	747814 324	0-0 5	Radionuclides	Alpha Spec
Wind Blown Area	N6	N6-SW	2088552 053	747814 324	0-0 5	Radionuclides	Alpha Spec
Wind Blown Area	P9	DP50-000	2091118 500	751522 500	0-0 5	Radionuclides	Alpha Spec
Wind Blown Area	P9	P9-NE	2091412 053	751818 324	0-0 5	Radionuclides	Alpha Spec
Wind Blown Area	P9	P9-NW	2090840 053	751818 324	0-0 5	Radionuclides	Alpha Spec
Wind Blown Area	P9	P9-SE	2091412 053	751246 324	0-0 5	Radionuclides	Alpha Spec

Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analytic	Analytical Method
Wind Blown Area	P9	P9-SW	2090840 053	751246 324	0-0 5	Radionuclides	Alpha Spec
Wind Blown Area	R9	EB50-000	2093377 760	751522 630	0-0 5	Radionuclides	Alpha Spec
Wind Blown Area	R9	R9-NE	2093700 053	751818 324	0-0 5	Radionuclides	Alpha Spec
Wind Blown Area	R9	R9-NW	2093128 053	751818 324	0-0 5	Radionuclides	Alpha Spec
Wind Blown Area	R9	R9-SE	2093700 053	751246 324	0-0 5	Radionuclides	Alpha Spec
Wind Blown Area	R9	R9-SW	2093128 053	751246 324	0-0 5	Radionuclides	Alpha Spec
Wind Blown Area	R10	EB56-000	2093388 918	752673 260	0-0 5	Radionuclides	Alpha Spec
Wind Blown Area	R10	R10-NE	2093674 695	752945 757	0-0 5	Radionuclides	Alpha Spec
Wind Blown Area	R10	R10-NW	2093102 695	752945 757	0-0 5	Radionuclides	Alpha Spec
Wind Blown Area	R10	R10-SE	2093674 695	752373 757	0-0 5	Radionuclides	Alpha Spec
Wind Blown Area	R10	R10-SW	2093102 695	752373 757	0-0 5	Radionuclides	Alpha Spec
Upper Walnut Creek Drainage	L10	CT56-000	2086546 500	752606 062	0-0 5	Metals	6010
Upper Walnut Creek Drainage	L10	L10-NE	2086836 053	752962 324	0-0 5	Metals	6010
Upper Walnut Creek Drainage	L10	L10-NW	2086264 053	752962 324	0-0 5	Metals	6010
Upper Walnut Creek Drainage	L10	L10-SE	2086836 053	752390 324	0-0 5	Metals	6010
Upper Walnut Creek Drainage	L10	L10-SW	2086264 053	752390 324	0-0 5	Metals	6010
Upper Walnut Creek Drainage	M10	CY56-000	2087689 500	752665 500	0-0 5	Radionuclides	Alpha Spec
						Metals	6010

Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
Upper Walnut Creek Drainage	M10	M10-NE	2087980 053	752962 324	0-0.5	Radium/	Alpha Spec
Upper Walnut Creek Drainage	M10	M10-NW	2087408 053	752962 324	0-0.5	Radionuclides	6010
Upper Walnut Creek Drainage	M10	M10-SE	2087952 604	752472 670	0-0.5	Radionuclides	Alpha Spec
Upper Walnut Creek Drainage	M10	M10-SW	2087353 155	752376 599	0-0.5	Radionuclides	6010
Upper Walnut Creek Drainage	N9	DE50-000	2088799 784	751555 248	0-0.5	Radionuclides	Alpha Spec
Upper Walnut Creek Drainage	N9	N9-NE	2089105 823	751890 176	0-0.5	Radionuclides	Alpha Spec
Upper Walnut Creek Drainage	N9	N9-NW	2088483 878	751752 828	0-0.5	Radionuclides	Alpha Spec
Upper Walnut Creek Drainage	N9	N9-SE	2089118 309	751230 773	0-0.5	Radionuclides	Alpha Spec
Upper Walnut Creek Drainage	N9	N9-SW	2088546 309	751230 773	0-0.5	Radionuclides	Alpha Spec
Upper Walnut Creek Drainage	N10	DE56-000	2088832 500	752739 798	0-0.5	Metals	6010
Upper Walnut Creek Drainage	N10	N10-NE	2089064 615	752962 324	0-0.5	Metals	6010
Upper Walnut Creek Drainage	N10	N10-NW	2088552 053	752962 324	0-0.5	Metals	6010
Upper Walnut Creek Drainage	N10	N10-SE	2089124 053	752390 324	0-0.5	Metals	6010
Upper Walnut Creek Drainage	N10	N10-SW	2088552 053	752390 324	0-0.5	Metals	6010
Upper Walnut Creek Drainage	N11	DE62-000	2088832 500	753808 500	0-0.5	Metals	6010
Upper Walnut Creek Drainage	N11	N11-NE	2089124 053	754106 324	0-0.5	Metals	6010
Upper Walnut Creek Drainage	N11	N11-NW	2088552 053	754106 324	0-0.5	Metals	6010

Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
Upper Walnut Creek Drainage	N11	N11-SE	2089124 053	753460 026	0-0.5	Metals	6010
Upper Walnut Creek Drainage	N11	N11-SW	2088552 053	753534 324	0-0.5	Metals	6010
Upper Walnut Creek Drainage	O10	DK56-000	2089975 500	752665 500	0-0.5	Radionuclides Metals	Alpha Spec 6010
Upper Walnut Creek Drainage	O10	O10-NE	2090268 053	752962 324	0-0.5	Radionuclides Metals	Alpha Spec 6010
Upper Walnut Creek Drainage	O10	O10-NW	2089880 363	753085 843	0-0.5	Radionuclides Metals	Alpha Spec 6010
Upper Walnut Creek Drainage	O10	O10-SE	2090268 053	752390 324	0-0.5	Radionuclides Metals	Alpha Spec 6010
Upper Walnut Creek Drainage	O10	O10-SW	2089696 053	752390 324	0-0.5	Radionuclides Metals	Alpha Spec 6010
Upper Walnut Creek Drainage	O11	DK62-000	2089975 500	753808 500	0-0.5	Radionuclides Metals	Alpha Spec 6010
Upper Walnut Creek Drainage	O11	O11-NE	2090268 053	754106 324	0-0.5	Radionuclides Metals	Alpha Spec 6010
Upper Walnut Creek Drainage	O11	O11-NW	2089696 053	754106 324	0-0.5	Radionuclides Metals	Alpha Spec 6010
Upper Walnut Creek Drainage	O11	O11-SE	2090268 053	753534 324	0-0.5	Radionuclides Metals	Alpha Spec 6010
Upper Walnut Creek Drainage	O11	O11-SW	2089696 053	753534 324	0-0.5	Radionuclides Metals	Alpha Spec 6010
Lower Walnut Creek Drainage	N12	DE67-000	2088832 500	754951 500	0-0.5	Radionuclides Metals	Alpha Spec 6010
Lower Walnut Creek Drainage	N12	N12-NE	2089124 053	755250 324	0-0.5	Radionuclides Metals	Alpha Spec 6010
Lower Walnut Creek Drainage	N12	N12-NW	2088552 053	755250 324	0-0.5	Radionuclides Metals	Alpha Spec 6010

Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
Lower Walnut Creek Drainage	N12	N12-SE	2089124 053	754678 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Lower Walnut Creek Drainage	N12	N12-SW	2088552 053	754678 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Lower Walnut Creek Drainage	N13	DE73-000	2088832 500	756094 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Lower Walnut Creek Drainage	N13	N13-NE	2089124 053	756394 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Lower Walnut Creek Drainage	N13	N13-NW	2088552 053	756394 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Lower Walnut Creek Drainage	N13	N13-SE	2089124 053	755822 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Lower Walnut Creek Drainage	N13	N13-SW	2088552 053	755822 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Lower Walnut Creek Drainage	N14	DE78-000	2088756 390	757020 395	0-0 5	Radionuclides Metals	Alpha Spec 6010
Lower Walnut Creek Drainage	N14	N14-NE	2089111 261	757141 771	0-0 5	Radionuclides Metals	Alpha Spec 6010
Lower Walnut Creek Drainage	N14	N14-NW	2088488 093	757256 899	0-0 5	Radionuclides Metals	Alpha Spec 6010
Lower Walnut Creek Drainage	N14	N14-SE	2089111 261	756838 403	0-0 5	Radionuclides Metals	Alpha Spec 6010
Lower Walnut Creek Drainage	N14	N14-SW	2088488 093	756863 987	0-0 5	Radionuclides Metals	Alpha Spec 6010
Lower Walnut Creek Drainage	O12	DK67-000	2089975 500	754951 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Lower Walnut Creek Drainage	O12	O12-NE	2090268 053	755250 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Lower Walnut Creek Drainage	O12	O12-NW	2089696 053	755250 324	0-0 5	Radionuclides Metals	Alpha Spec 6010

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Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
Lower Walnut Creek Drainage	O12	O12-SE	2090268 053	754678 324	0-0 5	Radionuclides	Alpha Spec 6010 Metals
Lower Walnut Creek Drainage	O12	O12-SW	2089696 053	754678 324	0-0 5	Radionuclides	Alpha Spec 6010 Metals
Lower Walnut Creek Drainage	O13	DK73-000	2089952 292	756067 176	0-0 5	Radionuclides	Alpha Spec 6010 Metals
Lower Walnut Creek Drainage	O13	O13-NE	2090268 053	756394 324	0-0 5	Radionuclides	Alpha Spec 6010 Metals
Lower Walnut Creek Drainage	O13	O13-NW	2089696 053	756394 324	0-0 5	Radionuclides	Alpha Spec 6010 Metals
Lower Walnut Creek Drainage	O13	O13-SE	2090268 053	755822 324	0-0 5	Radionuclides	Alpha Spec 6010 Metals
Lower Walnut Creek Drainage	O13	O13-SW	2089696 053	755822 324	0-0 5	Radionuclides	Alpha Spec 6010 Metals
Lower Walnut Creek Drainage	P10	DP56-000	2091118 500	752665 500	0-0 5	Radionuclides	Alpha Spec 6010 Metals
Lower Walnut Creek Drainage	P10	P10-NE	2091412 053	752962 324	0-0 5	Radionuclides	Alpha Spec 6010 Metals
Lower Walnut Creek Drainage	P10	P10-NW	2090840 053	752962 324	0-0 5	Radionuclides	Alpha Spec 6010 Metals
Lower Walnut Creek Drainage	P10	P10-SE	2091412 053	752390 324	0-0 5	Radionuclides	Alpha Spec 6010 Metals
Lower Walnut Creek Drainage	P10	P10-SW	2090840 053	752390 324	0-0 5	Radionuclides	Alpha Spec 6010 Metals
Lower Walnut Creek Drainage	P11	DP62-000	2091118 500	753808 500	0-0 5	Radionuclides	Alpha Spec 6010 Metals
Lower Walnut Creek Drainage	P11	P11-NE	2091412 053	754106 324	0-0 5	Radionuclides	Alpha Spec 6010 Metals
Lower Walnut Creek Drainage	P11	P11-NW	2090840 053	754106 324	0-0 5	Radionuclides	Alpha Spec 6010 Metals
Lower Walnut Creek Drainage	P11	P11-SE	2091412 053	753534 324	0-0 5	Radionuclides	Alpha Spec 6010 Metals

Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
Lower Walnut Creek Drainage	P11	P11-SW	2090840 053	753534 324	0-0 5	Radionuclides	Alpha Spec
Lower Walnut Creek Drainage	P12	DP67-000	2091118 500	754951 500	0-0 5	Radionuclides Metals	Alpha Spec 6010
Lower Walnut Creek Drainage	P12	P12-NE	2091412 053	755250 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Lower Walnut Creek Drainage	P12	P12-NW	2090840 053	755250 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Lower Walnut Creek Drainage	P12	P12-SE	2091412 053	754678 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Lower Walnut Creek Drainage	P12	P12-SW	2090840 053	754678 324	0-0 5	Radionuclides Metals	Alpha Spec 6010
Lower Walnut Creek Drainage	P13	DS71-000	2091700 590	755741 843	0-0 5	Radionuclides Metals	Alpha Spec 6010
Lower Walnut Creek Drainage	P13	P13-NE	2092354 265	755956 849	0-0 5	Radionuclides Metals	Alpha Spec 6010
Lower Walnut Creek Drainage	P13	P13-NW	2091023 497	755999 652	0-0 5	Radionuclides Metals	Alpha Spec 6010
Lower Walnut Creek Drainage	P13	P13-SE	2092363 170	755657 224	0-0 5	Radionuclides Metals	Alpha Spec 6010
Lower Walnut Creek Drainage	P13	P13-SW	2091026 821	755669 454	0-0 5	Radionuclides Metals	Alpha Spec 6010
Lower Walnut Creek Drainage	Q10	DV56-000	2092261 500	752665 500	0-0 5	Radionuclides	Alpha Spec
Lower Walnut Creek Drainage	Q10	Q10-NE	2092556 053	752962 324	0-0 5	Radionuclides	Alpha Spec
Lower Walnut Creek Drainage	Q10	Q10-NW	2091984 053	752962 324	0-0 5	Radionuclides	Alpha Spec
Lower Walnut Creek Drainage	Q10	Q10-SE	2092556 053	752390 324	0-0 5	Radionuclides	Alpha Spec
Lower Walnut Creek Drainage	Q10	Q10-SW	2091984 053	752390 324	0-0 5	Radionuclides	Alpha Spec

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Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
Lower Walnut Creek Drainage	Q11	DV62-000	2092261 500	753808 500	0-0 5	Radionuclides	Alpha Spec
Lower Walnut Creek Drainage	Q11	Q11-NE	2092556 053	754106 324	0-0 5	Radionuclides	Alpha Spec
Lower Walnut Creek Drainage	Q11	Q11-NW	2091984 053	754106 324	0-0 5	Radionuclides	Alpha Spec
Lower Walnut Creek Drainage	Q11	Q11-SE	2092556 053	753534 324	0-0 5	Radionuclides	Alpha Spec
Lower Walnut Creek Drainage	Q11	Q11-SW	2091984 053	753534 324	0-0 5	Radionuclides	Alpha Spec
Lower Walnut Creek Drainage	Q12	DV67-000	2092261 500	754951 500	0-0 5	Radionuclides	Alpha Spec 6010 Metals
Lower Walnut Creek Drainage	Q12	Q12-NE	2092556 053	755250 324	0-0 5	Radionuclides	Alpha Spec 6010 Metals
Lower Walnut Creek Drainage	Q12	Q12-NW	2091984 053	755250 324	0-0 5	Radionuclides	Alpha Spec 6010 Metals
Lower Walnut Creek Drainage	Q12	Q12-SE	2092556 053	754678 324	0-0 5	Radionuclides	Alpha Spec 6010 Metals
Lower Walnut Creek Drainage	Q12	Q12-SW	2091984 053	754678 324	0-0 5	Radionuclides	Alpha Spec 6010 Metals
Lower Walnut Creek Drainage	R12	EB67-000	2093368 995	754950 277	0-0 5	Radionuclides	Alpha Spec 6010 Metals
Lower Walnut Creek Drainage	R12	R12-NE	2093700 053	755250 324	0-0 5	Radionuclides	Alpha Spec 6010 Metals
Lower Walnut Creek Drainage	R12	R12-NW	2093128 053	755250 324	0-0 5	Radionuclides	Alpha Spec 6010 Metals
Lower Walnut Creek Drainage	R12	R12-SE	2093700 053	754678 324	0-0 5	Radionuclides	Alpha Spec 6010 Metals
Lower Walnut Creek Drainage	R12	R12-SW	2093128 053	754678 324	0-0 5	Radionuclides	Alpha Spec 6010 Metals
Lower Walnut Creek Drainage	R13	EB73-000	2093402 859	755971 011	0-0 5	Radionuclides	Alpha Spec 6010 Metals

Exposure Unit	Cell Number	Location Code	Easting	Northing	Depth Interval (feet)	Analyte	Analytical Method
Lower Walnut Creek Drainage	R13	R13-NE	2093700 053	756253 683	0-0.5	Radionuclides Metals	Alpha Spec 6010
Lower Walnut Creek Drainage	R13	R13-NW	2093128 053	756247 569	0-0.5	Radionuclides Metals	Alpha Spec 6010
Lower Walnut Creek Drainage	R13	R13-SE	2093700 053	755730 602	0-0.5	Radionuclides Metals	Alpha Spec 6010
Lower Walnut Creek Drainage	R13	R13-SW	2093128 053	755718 372	0-0.5	Radionuclides Metals	Alpha Spec 6010

CDPHE Comments on the Draft CRA SAP Addendum 04-01	Response
<b>General Comments</b>	
<p>1 Overall, the Sampling and Analysis Plan (SAP) does not adhere to EPA's DQO process (EPA QA/G-4) Although this may not be a fatal flaw to the document, much more consideration needs to be given to the purpose and objectives (including performance criteria) of this sampling effort</p>	<p>The DQOs are described in Section 3.1.3 of the BZSAP and the CRA Methodology. Also, the document title was changed to indicate that it is a sampling addendum</p>
<p>2 The SAP lacks many details that would allow it to be implemented by field staff. Some of these details are addressed in the specific comments below. The SAP should serve as a "cookbook" to those individuals collecting the samples. Specific details of the methodology should be included and not left to the discretion of the field team. If possible, SOPs for sample collection could be developed and attached to the document. Several sections (see specific comments) should be revised to further clarify the intended procedures</p>	<p>The sampling methodologies are described in Section 4.8 of the BZSAP and procedures are described in Site SOPs (listed at the end of the BZSAP). Additional specific instructions (health and safety) are contained in Work Controls</p>
<p>3 The document provides a list of 'PCOCs'. Please add dioxins to the list although the majority of proposed sample locations fall within the area currently defined as the Buffer Zone (BZ), the intent of this sampling effort is not to focus solely on the BZ. Rather, the intent is to ensure that there is at least one sample available per 30 acres across the <u>entire</u> site. Based on a random grid starting point, each grid was evaluated for data availability. Those missing a metals and/or</p>	<p>Dioxins will be addressed in the data adequacy review and included in the second phase of sampling if required</p> <p>The introduction to the Addendum was re-written to address the data adequacy review. However, the intent of the current sampling effort is indeed to address the Buffer Zone. This was the focus of the work group discussions and it was an <i>a priori</i> decision prior to initiation of the data adequacy analysis that metals and radionuclide information was needed to fully address</p>

	radionuclide suite were then targeted for sample collection activities. It is suggested that the language in the document be revised to reflect a sitewide data-gathering event	risk in the Buffer Zone. Inclusion of the single grid cell in the Industrial Area (G8) was noted
	<b>Specific Comments</b>	<b>Response</b>
1	<p><u>Page 1 – Section 1.0 – First Sentence</u> Hopefully we are performing a “Final” Comprehensive Risk Assessment at the site. Please remove the word “Draft” from this sentence. Although the first version of the document might be draft, leaving it in draft form is not our desired outcome. The phrase “Comprehensive Risk Assessment” will suffice</p>	<p>It is agreed that there will ultimately be a “Final” Comprehensive Risk Assessment. However, the sampling task is in support of the Draft CRA.</p>
2	<p><u>Page 1 – Section 1.0 – Second Sentence</u> This sentence (and those immediately following) should be rewritten to reflect that the proposed sample collection will occur based on a site-wide assessment of available data. As mentioned in General Comment #3, the intent of this effort is not to focus solely on the buffer zone areas, but rather to focus on the site as a whole. Samples will be identified for collection if no previous metal and/or radionuclide suites have been collected within any given superimposed 30-acre grid</p>	<p>Please see response to general comment 3. In response to the last sentence of the comment, the word “no” was deleted from the referenced sentence.</p> <p>The statement “outside of areas that have no identified contaminant releases to the environment” could be interpreted to mean that sampling will be performed in contaminated areas</p>

3	<p><u>Page 1 – Section 2 0 Sampling</u> This section mixes both sample collection and analysis These sections should be separated and more details regarding both processes should be provided For example</p> <p>a <u>Sample Collection</u></p> <p>1 <b>Identification of Sampling Locations:</b> The text does a good job of presenting where samples will be collected However, some of the nomenclature for sampling locations is confusing Most cells have 3 systems of nomenclature cell name, four outer subsample names, and the center subsample name Showing these various labels in different fonts might help to distinguish them on Figure 5 The text describes how the four outer subsamples will be designated, but does not describe the nomenclature for the center subsample, which is different The following modification of the last four sentences of the paragraph on page 2 is suggested</p> <p>“Grid cells are numbered sequentially, beginning at the western edge of the BZ as shown on Figure 5 The four outer subsamples are designated by the cell number and the geographic quadrant within the cell For example, the subsample in the northwestern corner of grid number Q10 is designated Q10-NW The center subsample location will serve as the composite sample location, which will be designated by the center subsample location name The center subsample location names are</p>	<p>Page 2, Section 2 0, Sample Collection</p> <p>a ,1) The center subsample has been assigned a RADMS code, based on the RADMS sampling grids</p>

<p>consistent with a sitewide sample nomenclature system.” Additionally, a discussion of the “real-time” coordinate collection should be included, as well as how sample locations will be adjusted to account for physical obstructions</p> <p>ii <b>Collection Methods:</b> As written, the collection methods are fairly vague. What will samples be collected into (e.g., plastic bags, glass jars)? How will vegetation and debris be removed from the samples (e.g., hand-picked, sieving)? How will reusable sample equipment (if used) be decontaminated?</p>	<p>Page 2, Section 2 0, Sample Collection</p> <p>a , ii) Sample collection methods are describe in Section 4 8 of the BZSAP and in Site SOPs</p>	<p>Page 2, Section 2 0, Sample Collection</p> <p>a , iii) Generally, composite samples are not required, but because the CRA sampling is a special case, compositing will be in accordance with the 903 Pad sampling methodologies, already approved by EPA</p>
<p>iii <b>Preparation of Composite Samples:</b> Although, the QA/QC section (Section 3 0) provides some additional details on the preparation of the composites, this information would be more appropriately located in the sample collection section. Additional questions which arise include Where will composites be prepared (e.g., field, lab)? Will the volume of subsamples used to create the composite be measured or eyeballed? Will the subsamples be mixed prior to taking a fraction for the composite sample, in order to ensure homogeneity? Will any sieving of the subsamples or composite sample be required? Will the subsamples be retained as unique samples or will they be left in the field after the composite has been prepared?</p>	<p>Composites will be prepared in the field</p> <p>The volume of subsamples will be approximate (i.e., not weighed)</p> <p>The subsamples will not be mixed prior to taking a fraction for the composite sample</p> <p>Samples will not be sieved, but in accordance with RFETS procedures, care will be taken to remove rocks and debris</p>	<p>The subsamples will not be retained. All subsample material will be composited</p>

	b <u>Sample Analysis</u> i) <b>Analytical Methods:</b> Although these can be found in Table 3, the analytical methods and references to these methods should be provided in the text. A brief description of the analysis (e.g., alpha spec, ICP analysis) should be incorporated into the text ii) <b>Target Analytes:</b> Method 6010 identifies Phosphorous as a target analyte. Phosphorous is not currently listed in Table 1. Additionally, Uranium (Total) is not identified as an analyte in Method 6010. Will an alternate method be used to incorporate this analyte, or can Method 6010 be expanded to include this analysis? iii) <b>Detection Limits:</b> In addition to listing the radionuclide and metal analytes in Table 1, the detection limits for the analysis should also be provided	Page 2, Section 2 0, Sample Collection b , i) Analytical methods are discussed in BZSAP Section 4 7 and Appendix E  Normally, the analyte composition of the analytical suites is not provided in a sampling addendum. It was provided in this instance to familiarize members of the risk working group with the standard suites as defined for routine analysis at the Site. Discussions of analytical methodology are contained in the Sampling and Analysis Plans and the task orders to laboratories under contract to Kaiser-Hill
4	<u>Figure 1</u> The figure title indicates that this is both an “addendum” as well as a “buffer zone” sampling grid. It is suggested that the title simply be “CRA 30-Acre Sampling Grid”	Page 2, Section 2 0, Sample Collection b , iii) The MDLs for the analytes is in Appendix E of the BZSAP  The title of Figure 1 was changed as suggested
5	<u>Figure 2</u> Eventually there will need to be some form of assumption regarding Preble’s habitat within the Industrial Area based on a prediction of how the	This will be addressed in the CRA based on RFCAParty agreement on the final Industrial Area configuration

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	drainages will re-establish themselves	
6	<u>Figure 5 Remove “Buffer Zone” from the title [Note that Grnd G8 falls almost entirely within the Industrial Area ]</u>	The words “Buffer Zone” were removed from the title of Figure 5
7	<u>Page 8 – Table 2</u> Please include a row summarizing the total number (sampled and unsampled) of 30-acre grids across the site. Please revise ‘Number of Sampling Locations’ to ‘Number of Subsampling Locations’, since these areas are referred to as subsamples throughout the text. The last two rows should reflect that these are the total number of grids in which analyses of radionuclides or metals are required	The title of Table 2 was changed “Proposed Sampling Summary” The first category was changed to “Number of Proposed Grid Cells Sampled” The second category was changed to “Number of Proposed Grid Cells Sampled for Both Radionuclides and Metals” The third category was changed to “Number of Proposed Grid Cells Sampled for Radionuclides Only” The fourth category was changed to “Number of Proposed Grid Cells Sampled for Metals Only”
8	<u>Page 8 – Second Paragraph</u> Please consult with representatives of U S Fish & Wildlife Service to ensure that this approach is consistent with their needs when samples are collected from within Preble’s habitat. A little more description should be provided as to the reseeding process based on USFWS recommendations	The text in Section 2 0 was changed to indicate that USFWS consultation has occurred. The reseeding process as well as other best management practices in the Preble’s habitat are described in the Biological Evaluation
9	<u>Page 8 – Section 3 0 – Quality Assurance/Quality Control</u>	Section 3 0 was deleted

- a The majority of this section deals with sample collection procedures and is not relevant to the topic of QA/QC. As stated in Comment #3 above, this text could be moved to a sample collection section

	<p>b The text indicates that the QA/QC procedures will be in accordance with the BZSAP requirements If the appropriate QA/QC procedures are in the BZSAP, please add a reference to this document (DOE, 2002) to the text Because the BZSAP is soon to be replaced by the IABZSAP, it might be more appropriate to refer to the newer document, providing that the QA/QC procedures still apply</p> <p>c The text indicates that, although the QA/QC procedures will be in accord with the BZSAP, due to the collection of composites, some additional requirements will be implemented These additional requirements consist of field duplicates, blanks, and rinsates How do these differ from what would be collected in a traditional sample collection event as outlined in the BZSAP?</p> <p>d What are the performance criteria for determining if QA/QC data are acceptable? (e.g., percent differences between duplicate analyses)</p>	<p>DOE does not agree that EU's are not the focus of this sampling effort The reason this sampling effort is being performed is to support the CRA With the exception of the wide-ranging ecological receptors identified in the draft methodology, the CRA addresses risk on an EU basis One EU currently has no</p>
10	<p><u>Page 9 – Section 3.1 – QC Frequency</u></p> <p>a Because this is a site-wide sampling event, there is no reason to require a 5% frequency on an ‘EU-specific’ basis The EU’s are not the focus of this</p>	

<p>collection effort and data will not be segregated on an EU basis until the CRA. The goal of the QC samples is to ensure that the overall sampling effort met study requirements. Therefore, a minimum of a 5% QC frequency across all data should be sufficient (unless the site has previously reached agreement with the Agencies to meet a higher QC frequency during Rocky Flats collection efforts). Currently, the proposal of 12 samples would result in an overall 11% frequency (based on 108 (radionuclide) or 106 (metals) sampling grids)</p>	<p><sup>1</sup> <b>Field Duplicates:</b> In revising the SAP to reflect this change, a minimum of 5% of the sampling grids should be selected on a random basis. For convenience, the duplicate grid selection can be limited to those grids with both metals and radionuclides as analytes. Choosing the grid nearest to the center of each EU is not necessary. In fact, this approach may lead to more problems, as some of the EU's (e.g., Industrial Area, Windblown Area) do not have sampling activities targeted in areas central to the EU.</p> <p><sup>11</sup> <b>Blanks</b> What is intended to be used as a field blank?</p> <p><sup>111</sup> <b>Rinsates</b> The rinsate collection process needs to be more thoroughly described</p> <p><sup>a</sup> There are several types of field duplicates that should be considered. A small number of these</p>
<p>analytical data of any kind and others have little except the radiological and metals information that will be acquired under this addendum. DOE wishes to ensure the association of QC with real samples in these sparsely sampled EU's</p>	<p>Page 9 – Section 3 1 – QC Frequency  <sup>a , 1)</sup> The grids selected for duplicate sampling will be those where both radionuclides and metals will be sampled</p> <p>Page 9 – Section 3 1 – QC Frequency  <sup>a , ii)</sup> Deionized water</p> <p>Page 9 – Section 3 1 – QC Frequency  <sup>a , iii)</sup> After a sample has been collected, the equipment is decontaminated. Rinsates are collected by passing clean water over and through the decontaminated sampling equipment. This water becomes the rinsate blank, which is intended to be a</p>

	<p>samples would test various steps in the sample collection and analysis process</p> <p>i <b>Field Collection Duplicate.</b> This is the form of duplicate, which is discussed in the current text, and involves collecting an entirely unique sample from each of the sublocations. In other words, 2 sets of subsamples would be collected</p> <p>ii <b>Field Preparation Duplicate:</b> This form of duplicate would involve making a duplicate sample from the primary collected soils. In other words, after making the first sample, the technician would go back to the exact same material and create a second sample</p> <p>iii <b>Split Sample:</b> Create a duplicate by taking an aliquot of soil from the primary sample and submitted for analysis</p>	<p>measure of any contamination that remains after the standard decontamination procedures have been performed Rinsates will not be collected if disposable equipment is used</p> <p>Page 9 – Section 3.1 – QC Frequency b Field preparation duplicates are collected</p>
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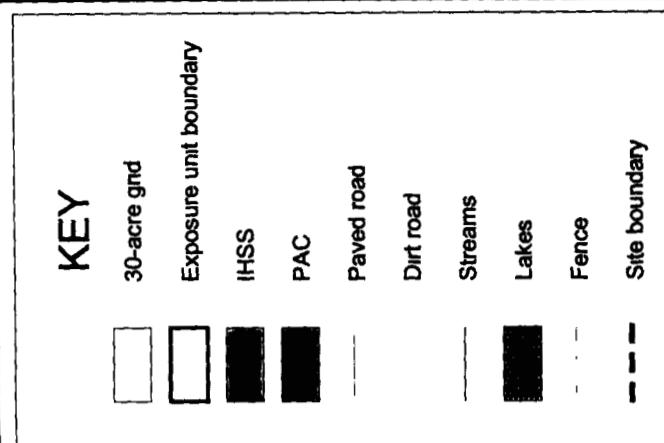
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EPA Comments on the Draft CRA SAP Addendum 04-01	Response
1 Section 1 0, Introduction, Page 1 The document describes the proposed grid sampling is being conducted to support completion of the CRA as agreed to by the Risk Assessment Working Group (RAWG) However, there is no mention that the specific reason that the buffer zone sampling is being conducted is to document the assumption that these areas are uncontaminated In addition, the Introduction and remainder of the document does not provide any indication as to the data quality objectives for the proposed sampling and analyses It is recommended that the Introduction be revised to indicate that the grid sampling is part of the in-progress data adequacy review for the CRA, and indicate that a second phase of CRA targeting sampling may also occur as a result of the data adequacy review In addition, it is recommended that the SAP be titled Phase 1, since it has been agreed that targeted samples will be scheduled as part of another phase of the SAP associated with the CRA	The Introduction was rewritten to clarify these concepts The DQOs are described in Section 3 1 3 of the BZSAP and the CRA Methodology  The title was changed to include "Phase 1"
2 Section 2 0, Sampling, Page 8, last paragraph The document discusses the approach associated with sampling in the Preble's Meadow Jumping Mouse (PMJM) habitat It is not evident that the DOE has coordinated with the Fish and Wildlife Service and met the requirements under the Endangered Species Act Please clarify the text to indicate whether this has occurred	The text in Section 2 0 was changed to indicate that USFWS consultation has occurred The reseeding process as well as other best management practices in the Preble's habitat are described in the Biological Evaluation  63

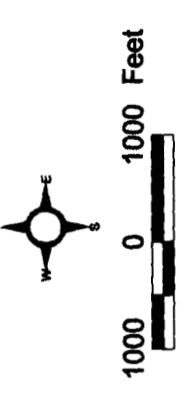
<p>3 Section 3.1, QC Frequency, Page 9 The objective and rationale for each type of QC sample should be provided. Also, please clarify how field blanks are to be "collected" since it assumed this is a clean media to be provided by the laboratory</p>	<p>The objective of the QC sampling is to ensure that the sampling meets the project objectives. Details of QC sampling are in the BZSAP, Appendix G and will not be included here. Section 3.0 was deleted. Also, the title of the document was changed to indicate that this is an addendum.</p> <p>Deionized water is used for the field blank. The blank is exposed to ambient air at the sampling location to collect potential contaminants.</p>
<p>4 Please indicate or provide a specific reference for how sample locations will be documented</p> <p>5 Please provide a schedule for the anticipated beginning and ending dates for the proposed sampling</p>	<p>Sampling locations will be surveyed, marked, and recorded in accordance with the BZSAP using GPS.</p> <p>The following text was added to Section 1.0 "It is anticipated that sampling activities will start during early March, 2004." Completion of sampling depends on weather, as well as reprioritization of sampling crews to address overall Site sampling requirements. It is anticipated that sampling will be completed by May 1.</p>

64  
65

**Figure 1**  
**30 Acre Sampling Grid**



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Scale 1:28,000  
State Plane Coordinate Projection  
Colorado Central Zone  
Datum NAD 27

U.S. Department of Energy  
Rocky Flats Environmental Technology Site

Prepared by [REDACTED]  
Date 02/10/04

Prepared for [REDACTED]  
KAIER HILL

Revised by [REDACTED]

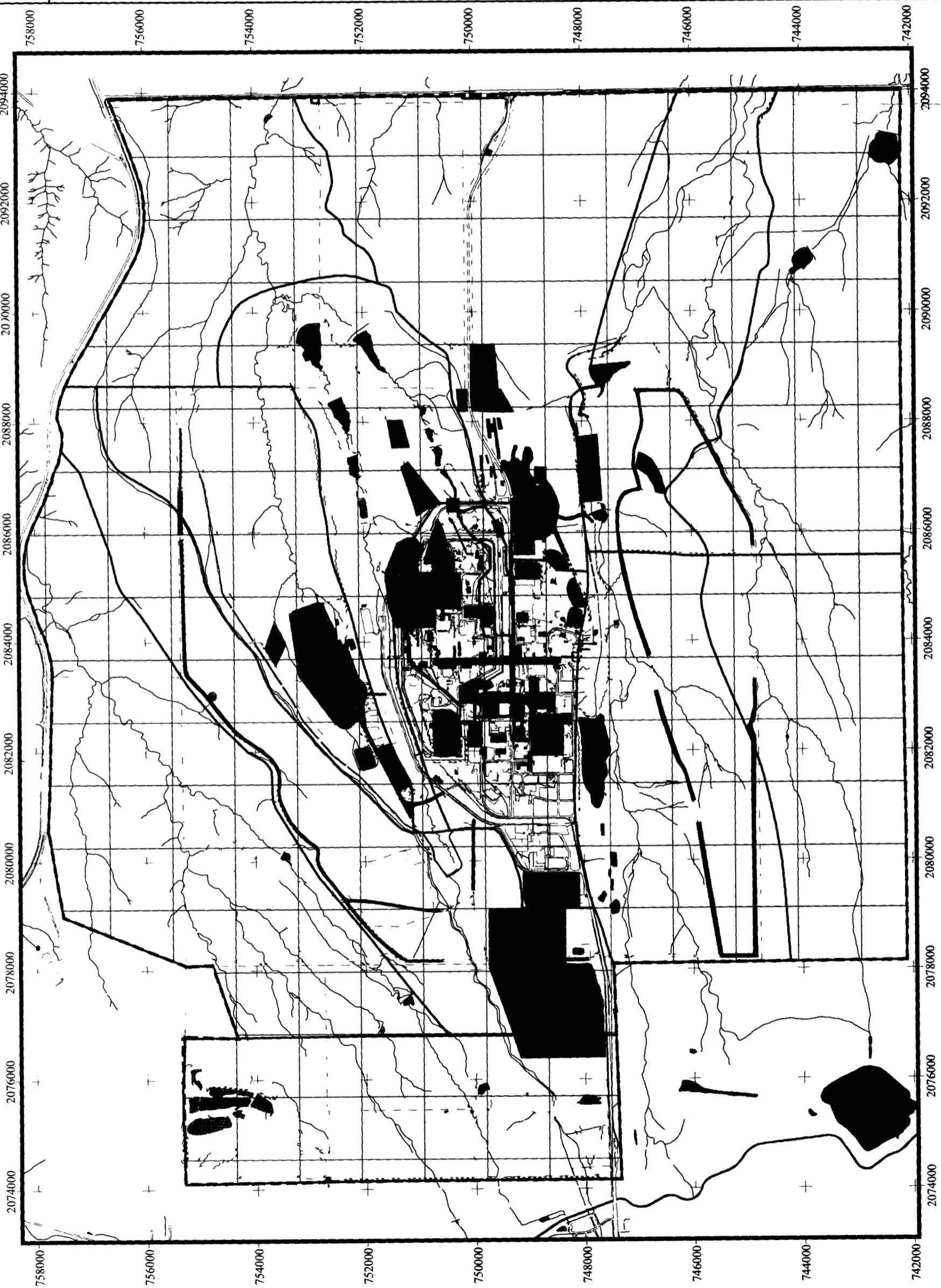
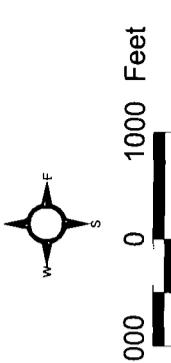


Figure 2  
Exposure Units and Preble's  
Meadow Jumping Mouse  
Protected Area

KEY

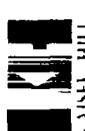
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Preble's Meadow Jumping Mouse  
Sepotat dace  
Pecos  
Dirt road  
Streams  
Lakes



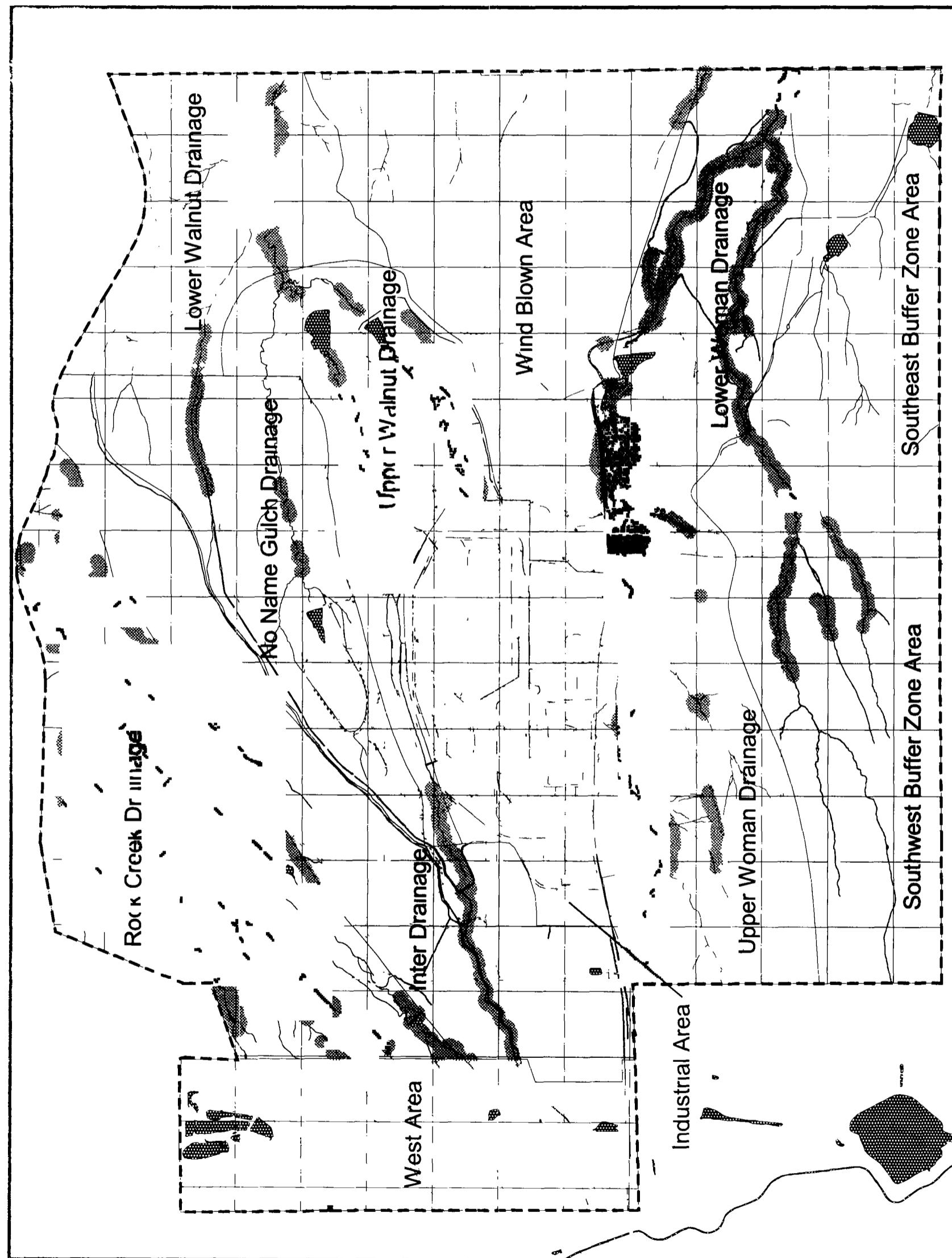
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D t m NAD 27

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Prepared by [redacted]  
Dt 02/10/04

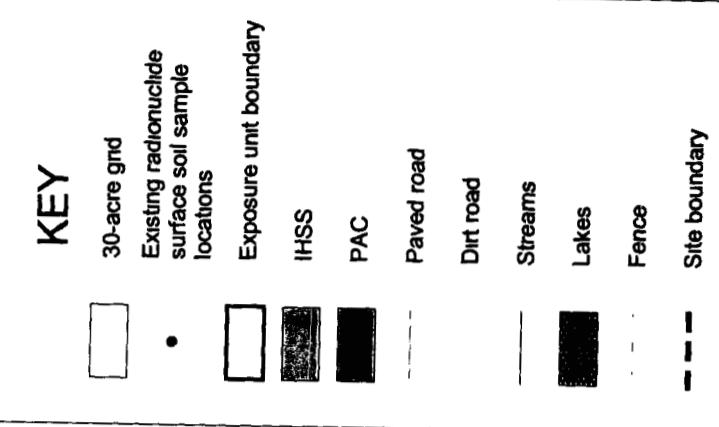
RADMS  
Prepared for [redacted]



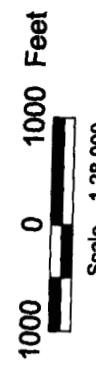
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**Figure 3**  
**30-Acre Grid with  
Existing Radionuclide Surface  
Soil Sampling Locations**



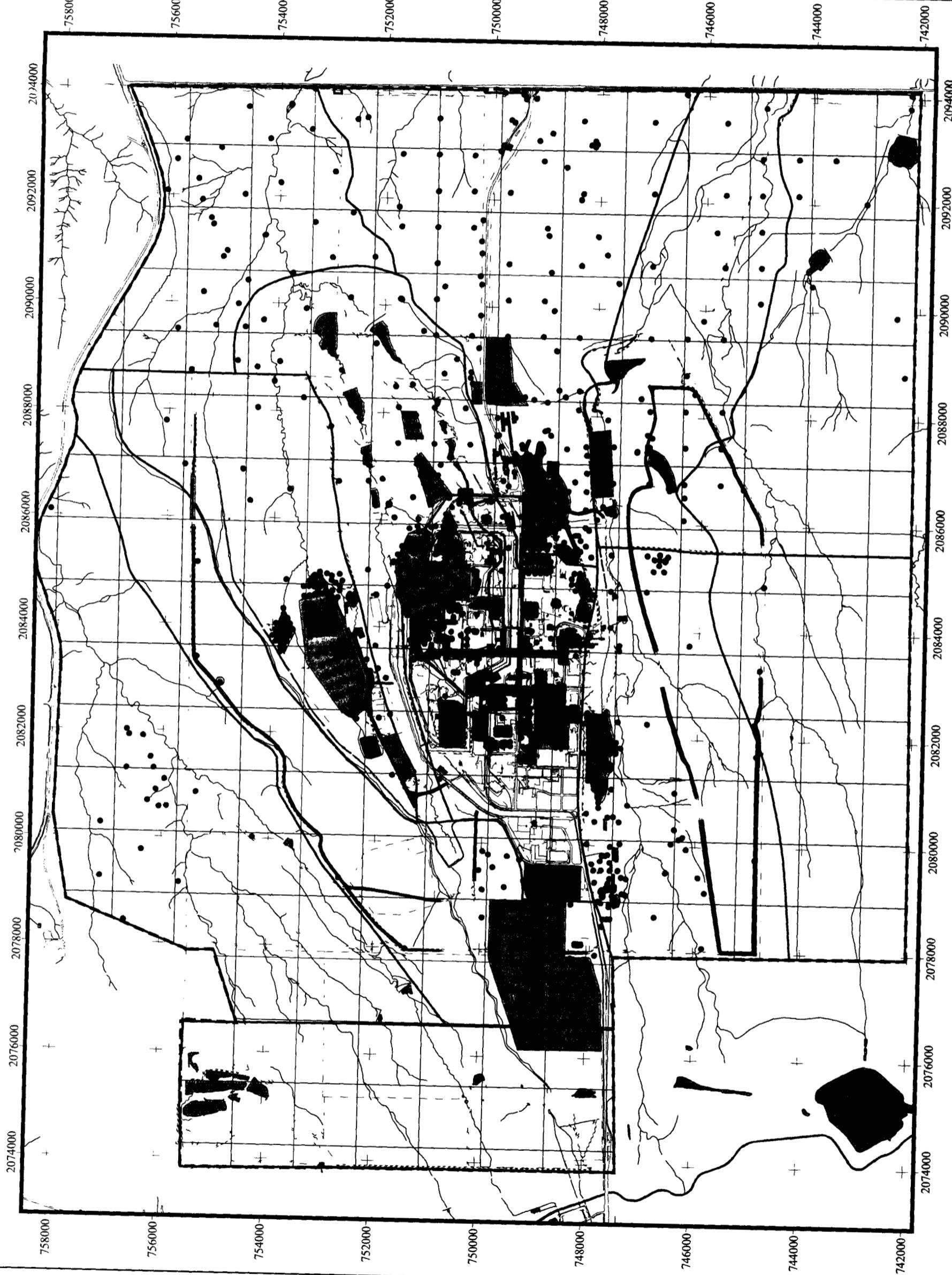
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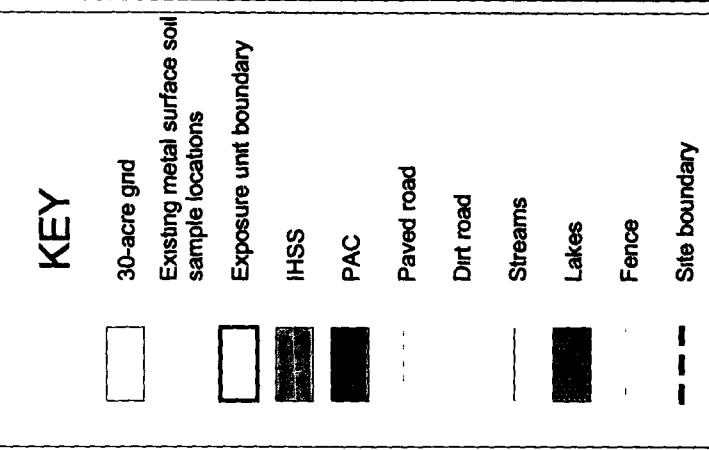
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Date 02/10/04

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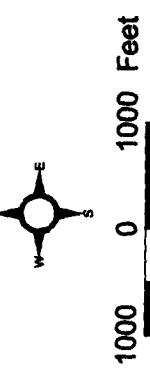


10

**Figure 4**  
**30 Acre Grid with  
Existing Metal Surface Soil  
Sampling Locations**



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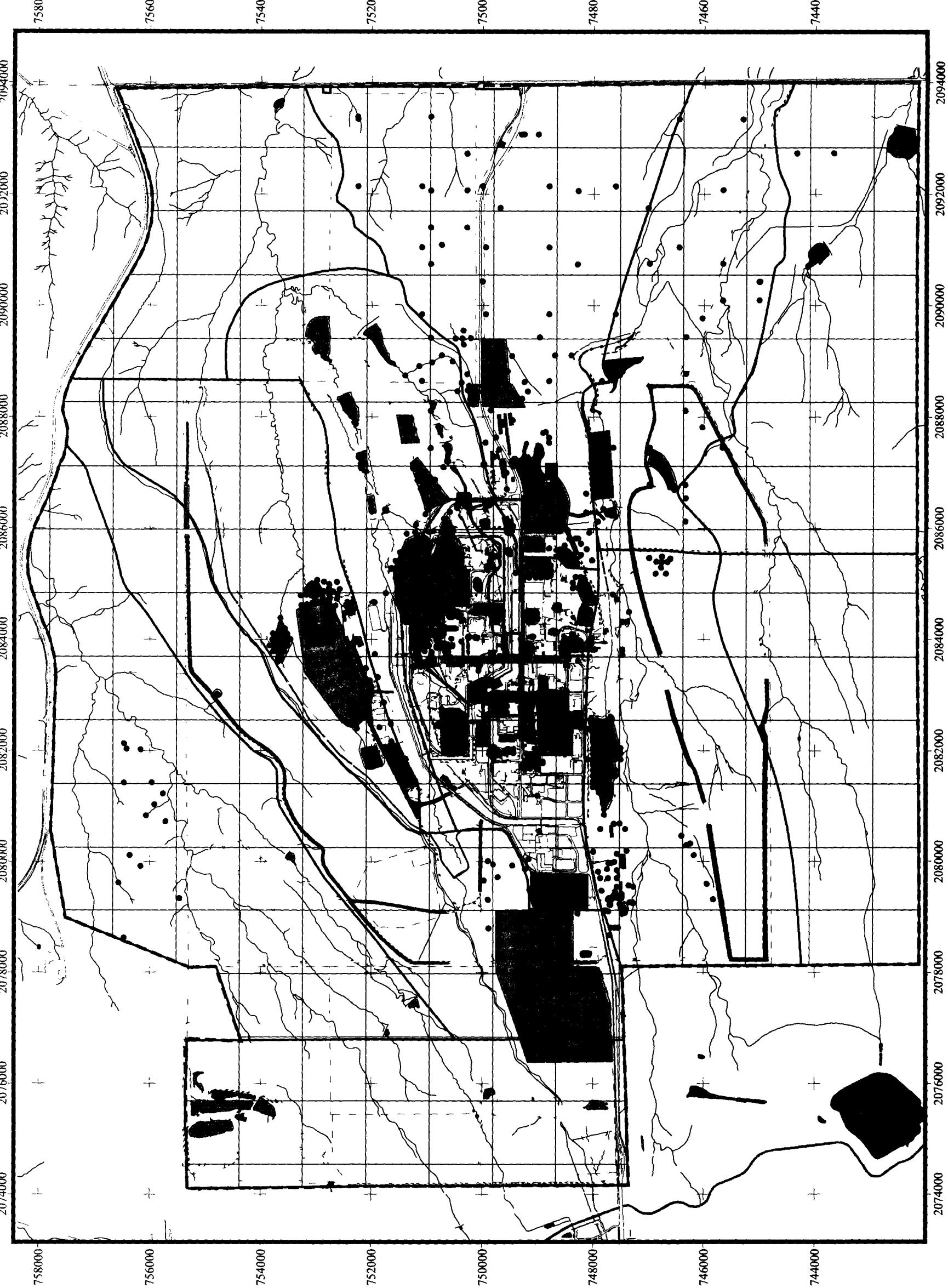
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**Figure 5**  
**30-Acre Grid Surface  
Soil Sampling Locations**

